

USER MANUAL

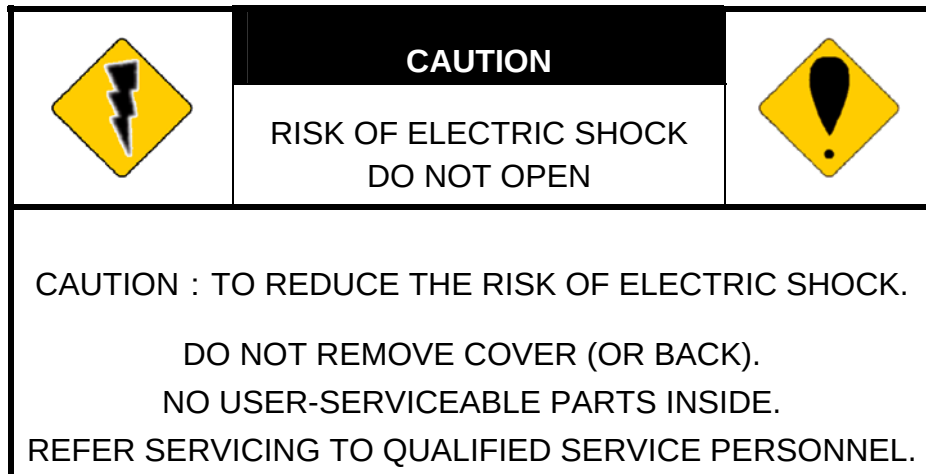
4 CH VIDEO SEVER

WARNINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

DO NOT INSERT ANY METALLIC & ELETRIC CONDUCTIVE OBJECT THROUGH VENTILATION GRILLS.

CAUTION



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THE TRADEMARKS MENTIONED IN THE MANUAL ARE LEGALLY REGISTERED TO THEIR RESPECTIVE COMPANIES.

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I. PREFACE

This is a four channel MPEG-4/MJPEG Video Server with web server built-in.

It encodes analogue signals of traditional cameras to digital signals; the users can monitor real-time video via IE browser. MPEG-4 compression format supports smooth video quality. Also, it supports USB backup. 2-way audio enables the user to have a video conference. In addition, the user can control Video Server with user friendly interface via IE browser to build a home surveillance system.

II. Product Specifications

Features:

- MPEG-4/MJPEG compression formats
- RS-485 Control Interface (PTZ)
- SD Card backup.
- Wireless network connection (802.11 b/ g) - Optional
- 2-way audio.
- Support Cell Phone/PDA
- Online firmware upgrade.
- Support dynamic IP and PPPoE through free DDNS.
- Support AVI video backup via IE browser.
- Compatible with Microsoft Windows Media Player.

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	64MB
ROM	8MB
Video Input	BNC x 4
Input Video Looping	BNC x 4
Audio In/Out	1 in / 1 out (RCA type)
Alarm Input	X4
Relay Out	X1
RS-485	X1, for PTZ control
Power	Lan: DC 12V 600mA / WLAN: DC 12V 700mA
Dimensions (WxHxD)	218x44x202mm
Network	
Ethernet	10/ 100 Base-T
Wireless	802.11b/g
WEP	64/ 128 bit
Network Protocol	HTTP, TCP/ IP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP
System	
Video Resolution	NTSC: 668x448, 336x224, 160x96
	PAL: 688x544, 336x272, 160x128
Video adjust	Brightness, Contrast, Saturation, Hue
Image snapshot	Yes
Full screen monitoring	Yes
Compression format	MPEG-4,JPEG
Video bitrate adjust	CBR, VBR
Motion Detection	1 Areas per 1 channel
Triggered action	Relay, Mail, FTP, Save to USB storage
Post alarm	Yes
Security	Password protection
Firmware upgrade	HTTP mode, can be upgraded remotely
Simultaneous connection	Up to 20
Audio	Yes, 2-way (Duplex Support)
USB Storage	
Recording trigger	Motion Detection, Alarm, IP check, Network Status (wire connection only)
Video format	AVI, JPEG

Delete files	Yes, can be deleted or overwrite
Client system requirement	
OS	Windows 2000, XP, 2003
IE	IE 6.0 or above
Hardware (Minimum)	Intel-C1.6G, RAM: 256MB, Graphic Card: 32MB

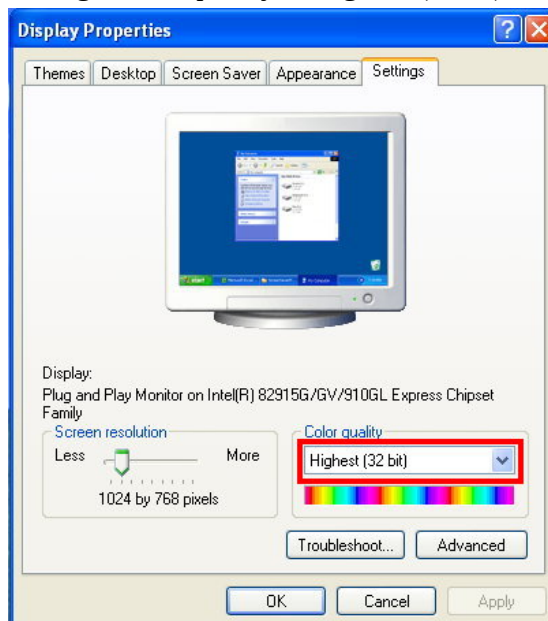
III. Product Installation

A. Monitor Setting

- i. Right-Click on the desktop. Select “ Properties”.



- ii. Change color quality to highest (32bit).



B. Hardware Installation

- i. Connect power adaptor
- ii. Connect Ethernet cable to Video Server
- iii. Connect Video Server to a computer or Local network.

B-1 I/O Control Instruction

I/O terminal connector – used in application, for e.g., motion detection, event triggering, alarm notifications. It provides the interface to:

1 Digital Input (GND+Alarm) – An alarm input for connecting devices that can toggle between an open and closed circuit, for example: PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active.

1 Relay output (COM +N.O. / COM + N.C.) – An output to Relay switch, for example: LEDs, Sirens, etc

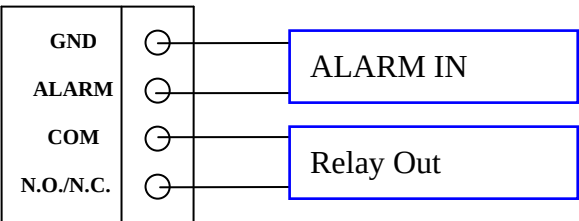
Digital Input

Alarm Input

- 1. GND (Ground) : Initial state is LOW
- 2. Alarm : Max. 50mA, 12VDC

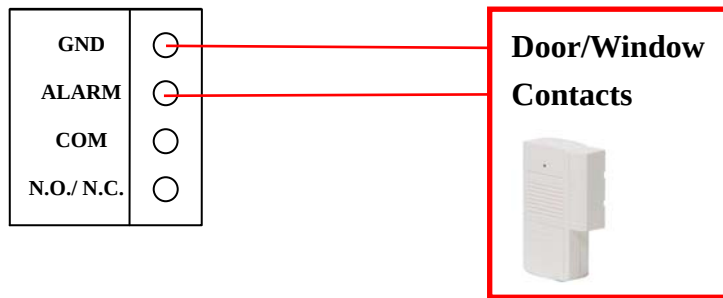
Relay Output

- 1. COM: (Common)
- 2. N.O. (Normally Open) / N.C. (Normally Close): Max. 1A, 24VDC or 0.5A, 125VAC

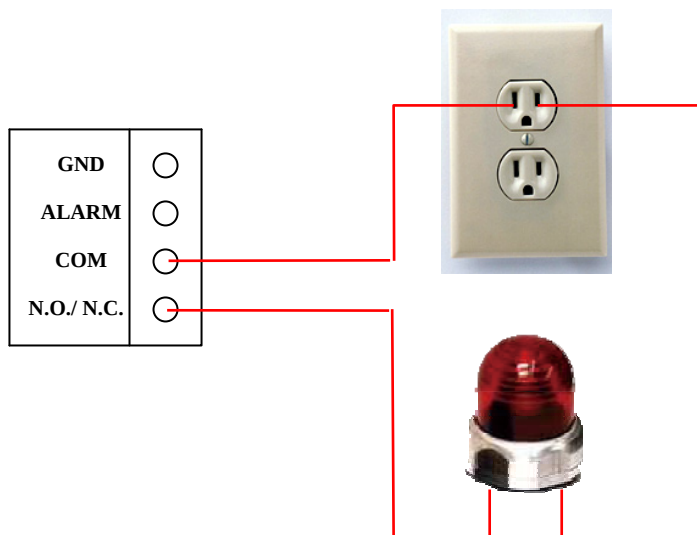


B-2 Relay Connection:

Digital Input connection



Relay Output Connection



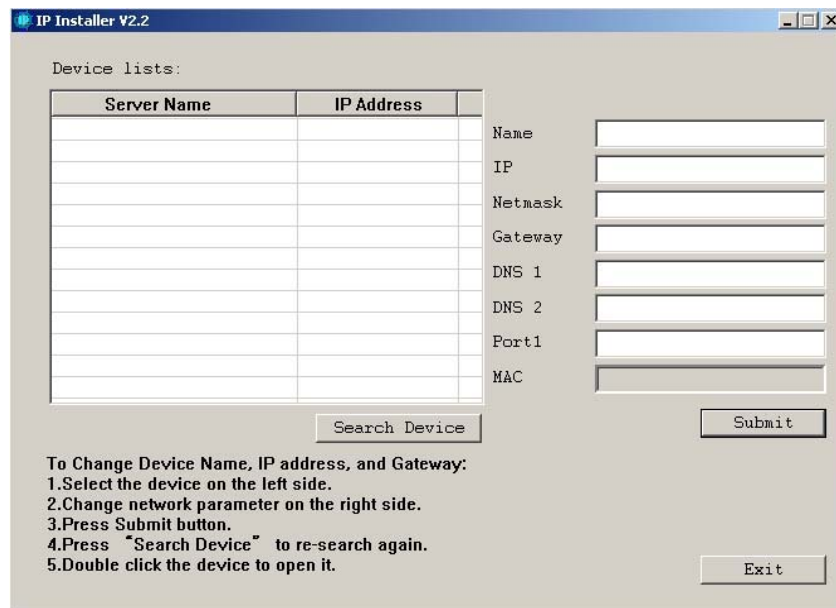
C. IP Assignment

- i. Use "IP Installer", comes with CD, to assign the IP address of VIDEO SERVER.
- ii. There are two languages for IP Installer :
 - a. IPInstallerCht.exe: Chinese version
 - b. IPInstallerEng.exe: English version
- iii. 3 different IP configurations based on different environments.
 - a. Fixed IP (Public IP or Virtual IP)

- b. DHCP (Dynamic IP)
- c. Dial-up (PPPoE)
- iv. Execute IP Installer
- v. Use Windows XP SP2 or newer version. If the following message popup, please click “Unblock.”



- vi. The GUI of IP Installer :



- vii. IP Installer searches all IP devices which connect with the internet and it lists all of them on the left side or the user can click “Search Device” to search again.
- viii. When the user clicks on each IP device listed on the left side of IP Installer, the network configuration of the IP device will show on the right side. The user can change the parameter and click on “Submit”. And, then, the following message will popup. Click on “OK” to reboot VIDEO SERVER.



- ix. Please make sure the subnet of PC IP address and VIDEO SERVER IP address are the same.

The same Subnet:

VIDEO SERVER IP address: 192.168.1.210

PC IP address: 192.168.1.100

Different Subnets:

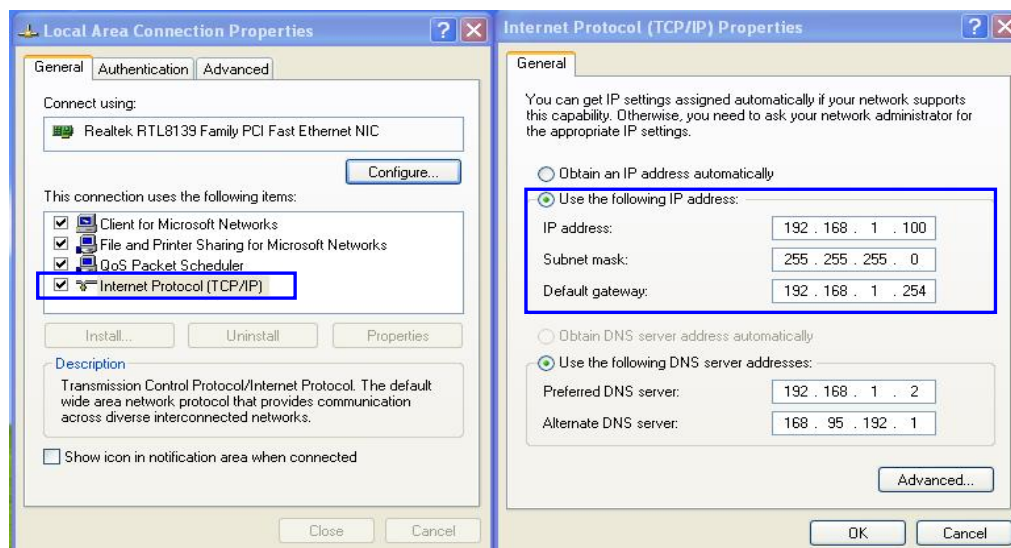
VIDEO SERVER IP address: 192.168.2.210

PC IP address: 192.168.1.100

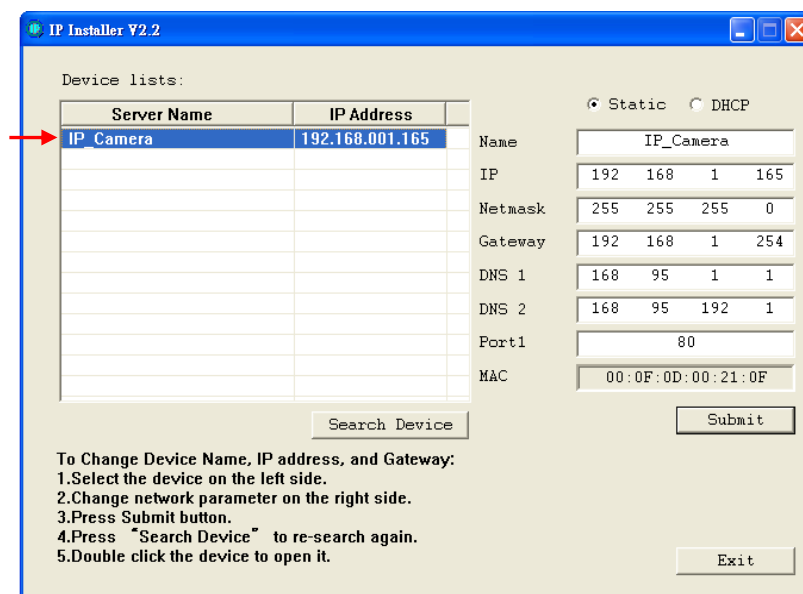
To Change PC IP address:

Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties

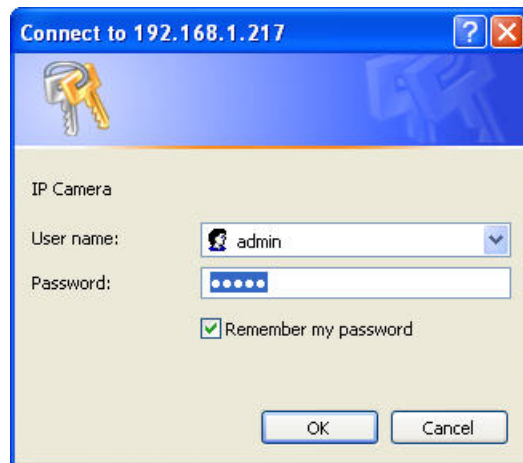
Please make sure your Video Server and PC have the same Subnet. If not, please change Video Server subnet or PC IP subnet accordingly.



- x. A quick way to access remote monitoring is to left-click the mouse twice on a selected Video Server listed on "Device list" of IP Installer. An IE browser will be opened.



- xi. Then, please key in the default “user name: admin” and “password: admin”.



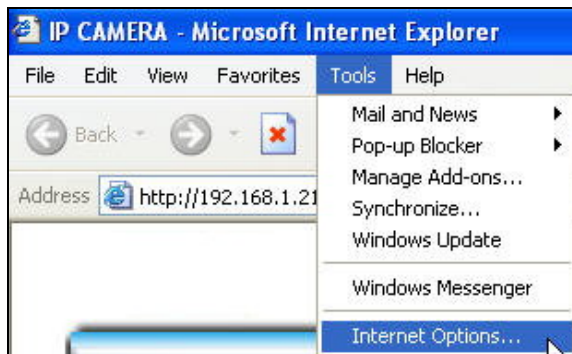
- xii. After VIDEO SERVER reboot, click “Search Device” to research VIDEO SERVER. And, use IE Browser for live viewing.

D. Install ActiveX control (setup once only):

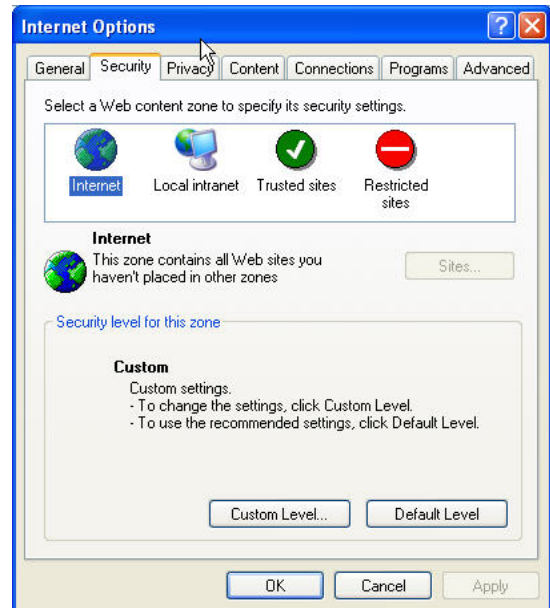
For the first time to view VIDEO SERVER via IE browser, it will request the user to install ActiveX.

Also, check the security setting as follows.

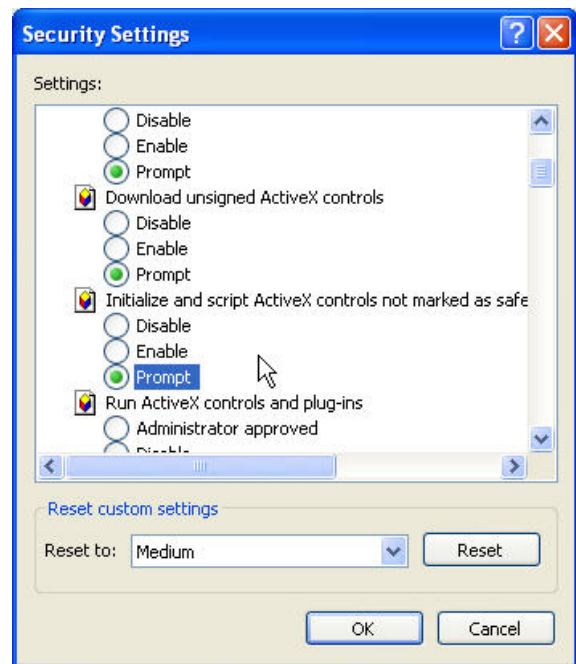
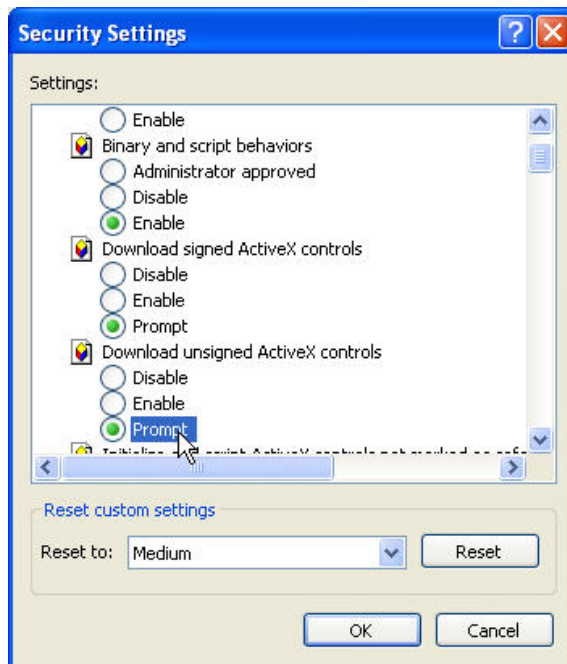
- i. IE → Tools → Internet Options... → Security Tap → Custom Level → Security Settings → Download unsigned ActiveX controls → Select “Enable” or “Prompt (Recommend)”.
- ii. IE → Tools → Internet Options → Security Tap → Custom Level... → Security Settings → Initialize and script ActiveX controls not marked as safe → Select “Enable” or “Prompt” (Recommend).



3

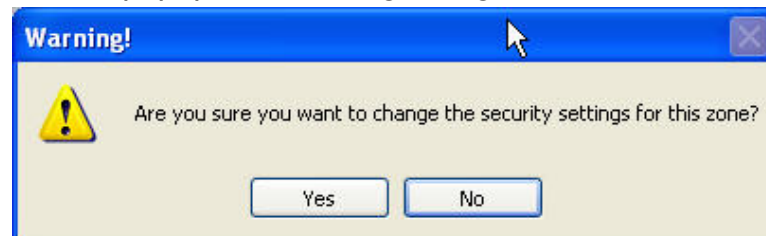


4



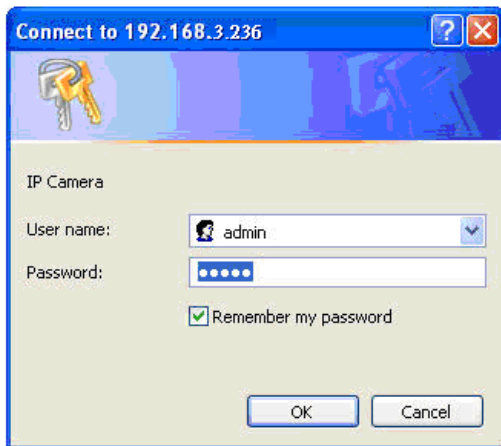
5

When popup the following dialogue box, click "Yes".

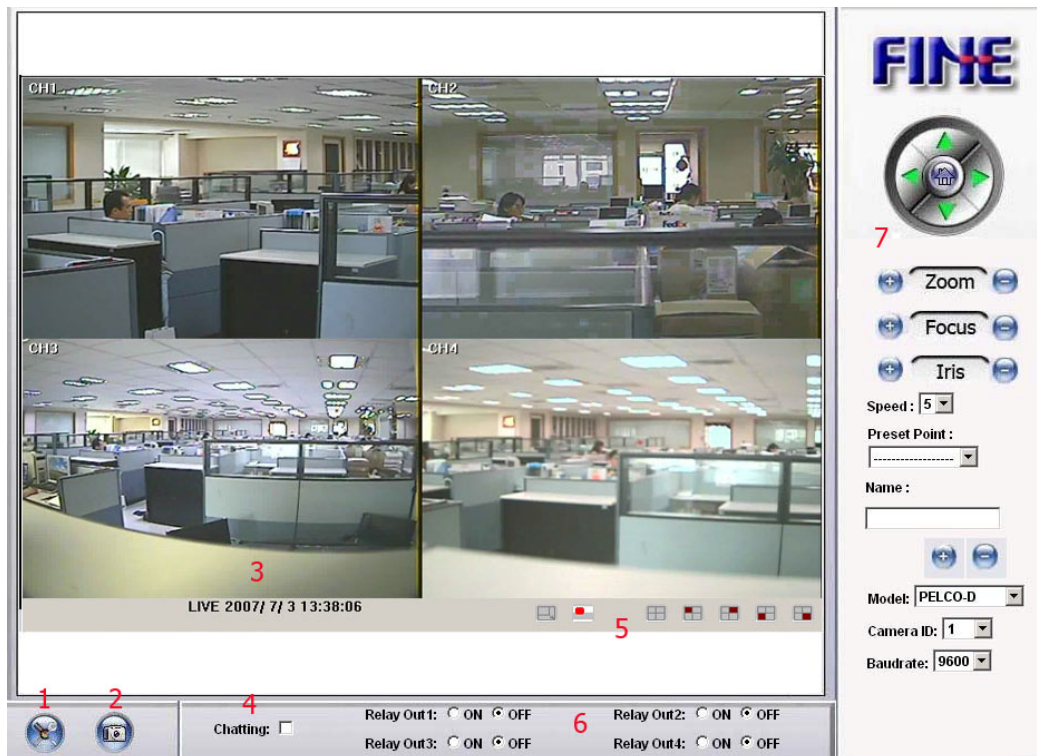


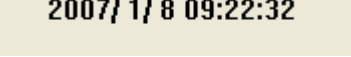
IV. Live Video

After executing IE browser and typing the IP address of VIDEO SERVER, the following message will popup and request the user to input the user name and password. The default user name and password are “admin” and “admin.”



When the user name and the password are correct, it will connect to VIDEO SERVER via IE Browser. The GUI will display as follows.



1.  : Get into the administration page.
2.  : Video Snapshot.
3. Live Video. The user can click on each channel for single channel format.
4. VIDEO SERVER supports 2-way audio. After click on “Chatting”, the user can use the microphone which connects with the PC to talk to the server side.
5. Status and Function keys :
 - A .  Monitor with full screen. Click on  again to return normal mode.
 - B .  Record with AVI file.
 - C .  Select each channel to control.
 - E .  Date and Time displayed.
6. Relay Output Control.
7. PTZ control. When the user click on a certain channel and if it connects with PTZ camera, the user can click on “Model” to select protocols and use PTZ function to control the camera.

V. VIDEO SERVER Configuration

Click  to get into the administration and click on  to return to the live viewing as follows.



System Information	
Server Information	
Server Name:	Video_Server
MAC Address:	00:0F:0D:20:0C:2D
Language :	☒ English ☐ 繁體中文 ☐ 简体中文
Overlay Setting	
	☐ Enabled ☒ Disabled
Time Setting	
Server Time:	11/30/2006 18:33:38 Time Zone: GMT+08:00
Time zone:	GMT+08:00
☐ NTP :	
NTP Server :	198.123.30.132
☒ Input Date & Time ☒ Synchronize with PC's time	
Date :	12/15/2006
Time :	11:32:7
Apply	

A. System

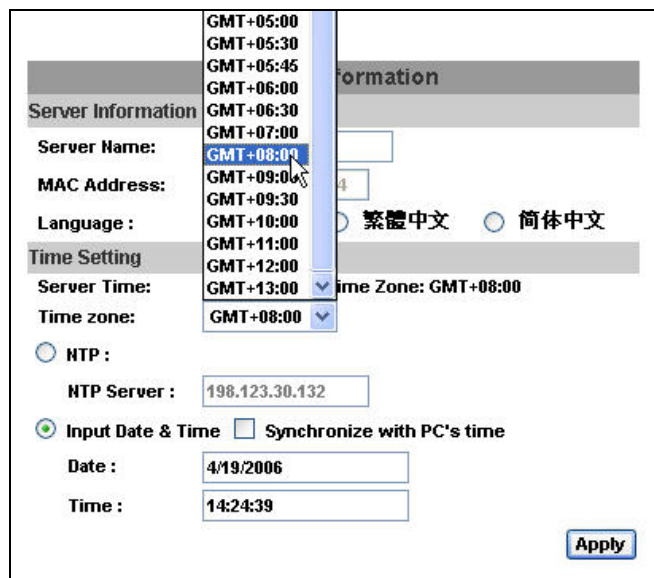
i. System Setup

Set up the video server name, select language, and the time on this video server.

- a. Sever name : This is the video server name for the user to search on IP Installer.
- b. Select language : There are English, Traditional Chinese, and simplified Chinese. When a certain language is selected, the following message will popup and ask the user to confirm language changed.



- c. Sever time setting : Use NTP or Input Date & Time.



ii. User Management

Support three authorities: administrator (the highest), user, and anonymous user.

Default Username and Password: admin/ admin

User Management

Anonymous User Login

☐ YES ☒ NO

Add User

Username:

Password:

Confirm:

User List

Username	User Group	Modify	Remove
admin	Administrator	Edit	

a. Anonymous User Login :

Yes : Allow anonymous login.

No : Require user name and password to login.

b. Add user :

Type the user name and password and then click on “Add/ Set”.

c. Click on “Edit” or “Delete” to modify the user.

User_Setting - Microsoft Internet Explorer

User Setup

Username:

Password:

Confirm:

iii. System update

System Update

Firmware Upgrade

Firmware Version: V2.0.2

New Firmware:

Reboot System

Factory Default

Update the firmware online. Click on “Browse...” to select the firmware. And then, click on “Upgrade.”

Other settings :

Reboot system : Reboot the video server.

Factory default : Recover all settings.

B.Network

i. IP Setting

VIDEO SERVER supports static IP and DHCP.

IP Setting

IP Assignment

☐ DHCP

☒ Static

IP Address: 192.168.3.236

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.254

DNS 0: 168.95.1.1

DNS 1: 168.95.192.1

Port Assignment

Web Page Port: 80

Apply

- a. DHCP : Use Dynamic Host Configuration Protocol to get all network parameters automatically.
- b. Static IP : Type IP address, subnet mask, gateway, and DNS.
- c. DNS :
With DHCP, DNS will be assigned automatically.
Static IP: Based on the network environment.
- d. Port : If the user uses the router, some ports have to be adjusted in case of conflict.

ii. PPPoE

PPPoE

PPPoE Setting

☐ Enabled ☒ Disabled

Username:

Password:

Send mail after dialed

☐ Enabled

Subject: PPPoE From IPcam

Apply

If the user wants to use ADSL, please select "Enabled".

Username: username for ADSL connection.

Password: password for ADSL connection.

Send mail after dialed : After this function is enabled, it will send an email to a specific mail account. For the mail setting, please refer to IV. “Mail and FTP” settings.

iii. DDNS

VIDEO SERVER supports DDNS. It uses dynamic IP to redirect IP and connect with the video sever.

VIDEO SERVER supports 3 kinds of DDNS severs, including dyndns.org, ddns.camddns.com, and ddns2.ydsdvr.com.

a. DynDNS ;

DDNS

DDNS Setting

☐ Enabled ☒ Disabled

Provider:

Hostname:

Username:

Password:

Schedule Update: Minutes

State

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or IAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. DDNS Setting: Enable or Disable DDNS setting.
2. Input the DynDNS's host name, user name, and password.
3. Schedule Update: Default 1440 minutes.
* dyndns.org: If the user's schedule update is too often, it will be blocked. Recommend the user to update once per day (1440 minutes per day).
4. Click on “Apply” to save.

b. Camddns :

DDNS

DDNS Setting

☐ Enabled ☒ Disabled

Provider: ddns.camddns.com

Username:

Schedule Update: 1440 Minutes

State

Idle

Apply

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or IAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.

2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Input user name.
2. Schedule Update: Default 1440 minutes.
3. Click on “Apply” on save.

c. DDNS State :

1. Updating: Information updating.
2. Idle: Stop Service.
3. DDNS registration successful, can now log by <http://<username>.ddns.camddns.com>: Register successfully.
4. Update Failed, the name is already registered: The user name has already been used. Please change another one.
5. Update Failed; please check your internet connection: Network connection failed.

iv. Wireless Setting

VIDEO SERVER supports 802.11b/g wireless connection. **(Notice:**

While using wireless setting, the user has to unplug Ethernet cable

because both use the same IP. If the user doesn't unplug Ethernet cable, wireless setting can not be executed).

The screenshot shows a web interface for wireless settings. At the top is a table titled "Status of Wireless Networks" with columns for SSID, Mode, Security, and Signal strength. Below this is a "Wireless Setting" panel with fields for MAC Address, Mode, Operation Mode, SSID, and Security, each with a dropdown menu. An "Apply" button is at the bottom right.

SSID	Mode	Security	Signal strength
RHOSON	Infrastructure	WEP	13
SinoStar	Infrastructure	WEP	12
Default	Infrastructure	WEP	73
3Com	Infrastructure	OFF	35
7F-2-2	Infrastructure	WEP	4

Wireless Setting

MAC Address: 00:11:E2:03:37:48

Mode: Infrastructure ▼

Operation Mode: Auto ▼

SSID: Default

Security: None ▼

Apply

a. Status of Wireless Networks ;

it can scan all wireless services.

b. Wireless Setting :

1. **Mode** : There are Infrastructure and Ad-hoc. Infrastructure is for connecting with the router. Ad-hoc is for connecting with PC. When the user uses Ad-hoc mode, there is "Channel" to select. e.g. If one PC's channel is 1, the other's channel has to 1, too.

This screenshot is similar to the previous one, but the "Channel" dropdown menu is highlighted with a red rectangle. The "Mode" is set to "Ad-hoc" and the "Channel" is set to "6".

Wireless Setting

MAC Address: 00:11:E2:03:37:48

Mode: Ad-hoc ▼

Operation Mode: Auto ▼

SSID: Default

Channel: 6 ▼

Security: None ▼

2. **SSID** : Based on AP setting.
3. **Channel** : This is only be used when the user selects Ad-hoc mode in order to avoid conflict.
4. **Security** : It supports "None", "WEP", "WPA-PSK" security encryption based on the setting of the Router.

『WEP』

- Authentication : There are Open System and Shared Keys, it is based on different encryptions. This has to be the same as the Router's setting.
- Encryption : There are 64 bits and 128 bits. This is based on Key Type based on the Router's setting.
- Key Type : There are HEX and ASCII. When selecting HEX, the user only can input 0~9 characters and use A, B, C, D, E, and F. And, when selecting ASCII, the user can input any character. (case [upper cases/ lower cases] sensitive).
- Key 1~4 : Based on Key Type to input characters.

The screenshot shows a router configuration page for WEP security. At the top, 'Security:' is set to 'WEP'. Below this is a section titled 'WEP Setting'. Inside this section, 'Authentication:' is set to 'Open System', 'Encryption:' is set to '64 bit', and 'Key Type:' is set to 'HEX' with a note '(10 character max)'. Below these settings are four rows for 'Key 1:', 'Key 2:', 'Key 3:', and 'Key 4:'. Each row has a radio button and a text input field. The radio button for 'Key 1:' is selected.

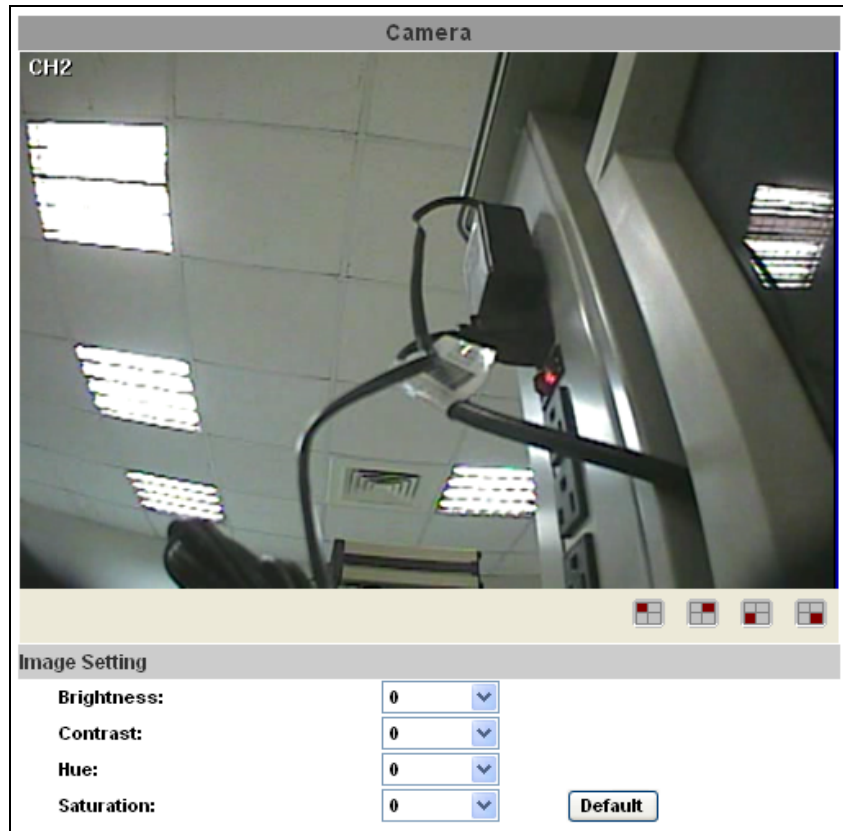
『WPA-PSK』 :

- Encryption : There are TKIP and AES.
- Pre-Shared Key : Allow any characters (case [upper cases/ lower cases] sensitive).

Security:	WPA-PSK ▼
WPA-PSK Setting	
Encryption	TKIP ▼
Pre-Shared Key:	(ASCII format, 8~63)

C.Multimedia

i. Image Setting

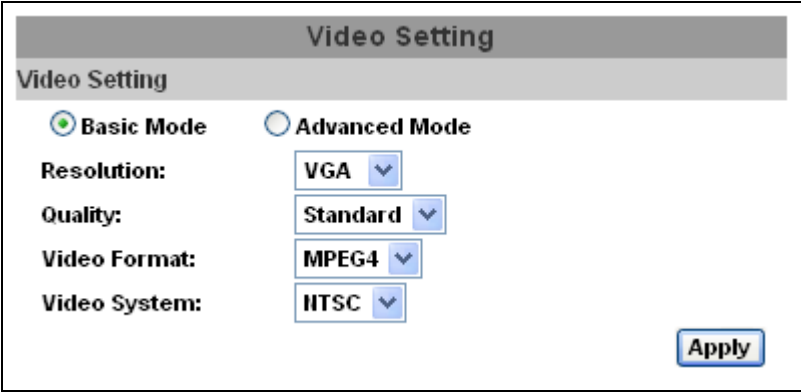


ii.  Select each channel to control.

iii. Adjust "Brightness", "Contrast", "Hue", and "Saturation".

iv. Video Setting

a. Basic mode :



The screenshot shows a 'Video Setting' dialog box. At the top, there is a title bar 'Video Setting' and a subtitle 'Video Setting'. Below this, there are two radio buttons: 'Basic Mode' (which is selected) and 'Advanced Mode'. Under 'Basic Mode', there are four settings, each with a dropdown menu: 'Resolution' set to 'VGA', 'Quality' set to 'Standard', 'Video Format' set to 'MPEG4', and 'Video System' set to 'NTSC'. An 'Apply' button is located at the bottom right of the dialog box.

1. Resolution :

There are 3 resolutions to be adjusted.

VGA

CIF

QCIF

2. Quality :

There are 5 qualities to be adjusted. The higher the quality is, the bigger the files size is.

3. Video Format : MPEG4 or JPEG.

4. Video System :

It supports NTSC and PAL.

b. Advanced Mode :

Video Setting

Video Setting

☐ Basic Mode ☒ Advanced Mode

Resolution: VGA

Bitrate Control Mode: ☒ CBR ☐ VBR

Video Quantitative: Q=10

Video Bitrate: 1.5Mbps

Video Frame Rate: 30 FPS

GOP Size: 1 X FPS GOP = 30

Video Format: MPEG4

Video System: ITSC

Apply

1. Resolution :

There are 3 resolutions to be adjusted.

VGA

CIF

QCIF

2. Bitrate Control Mode :

There are CBR(Constant Bit Rate)and VBR(Variable Bit Rate).

CBR ; 64Kbps~4Mbps。

VBR : Q=4~30。

If the bandwidth is smaller than CBR or VBR setup, it will cause legging and incomplete images.

3. Video Frame Rate :

The video refreshing rate per second. The highest Frame Rate is 30/ FPS.

4. GOP

It means "Group of Pictures." The higher the GOP is, the better the quality is.

5. Video Format : MPEG4 or JPEG.

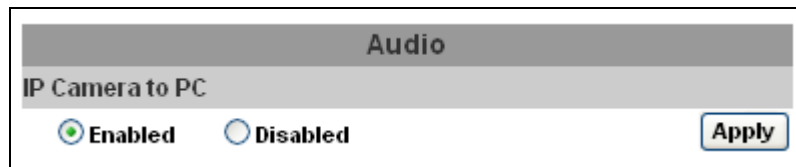
6. Video Format : It supports MPEG4.

7. Video System : It supports NTSC and PAL.

v. Audio:

VIDEO SERVER supports 2-way audio.

a. For the video server to local PC, select “Enabled” to enable this function.



b. For local PC to the video server, click on “chatting” on IE browser.



D.Event

VIDEO SERVER provides multiple event settings.

i. Event Setting

Event Setting

Motion Detection

Channel: 1 CH Sensitivity: 6 Clear Setting

☐ Enable CH 1: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to USB Storage

☐ Enable CH 2: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to USB Storage

☐ Enable CH 3: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to USB Storage

☐ Enable CH 4: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to USB Storage

Subject: Video Server Warning!

Interval: 10 sec

Network IP Check

IP Check: ☐ Enabled ☒ Disabled

IP Address: www.google.com

Interval: 30 sec

IP Check: ☐ Save to USB Storage Apply

VIDEO SERVER supports one motion detection area on each channel. When the motion is triggered, it can send out the video to a certain email address or upload the video to FTP. If the user has a USB device, they

can do USB backup. The user can click on  to

select channels and use the motion detection function.

Use the mouse to drag the area for motion detection area and then click on “Apply” to save.

ii. I/O Setting :

I/O Setting

Input Setting

Input 1 Action: ☐ E-mail ☐ FTP ☐ Out1 ☐ Out2 ☐ Out3 ☐ Out4 ☐ Save to SD card

Input 2 Action: ☐ E-mail ☐ FTP ☐ Out1 ☐ Out2 ☐ Out3 ☐ Out4 ☐ Save to SD card

Subject:

Interval: v

Output Setting

Mode Setting: ☒ OnOff Switch ☐ Slide Switch

Interval: v

- a. Input Setting :
 1. Input 1 Action : E-mail/ FTP/ Out1/ Out2/ Out3/ Out4/ Save to SD card.
 2. Input 2 Action : The same as Input 1.
 3. Subject : Default GPIO In Detected!
 4. Interval : Default 10 sec.
 5. Click on “Apply” to save.
- b. Output Setting : Mode Setting : OnOff Switch or Slide Switch. Click on “Apply” to save.
- iii. Mail and FTP

Mail & FTP	
Mail Setting	
Mail Server:	
Username:	
Password:	
Sender's Mail:	
Receiver's Mail:	
Bcc Mail:	
FTP Setting	
FTP Server:	
Username:	
Password:	
Port:	21
Path:	/
Apply	

To send out the video via mail or FTP, please set up the configuration first.

iv. USB Storage

a. Playback

Playback	
20080301	
USB: << 13053M / 58756M >>	

1. It will show the capacity of USB Device and the date of the video file. The user can choose a certain date to play back.

2007/01/08			Del
Time	Video	Event Type	☐
10:38:06	103806m.avi	Motion Detection	☐
10:39:35	103935m.avi	Motion Detection	☐
10:40:28	104028m.avi	Motion Detection	☐
10:41:08	104108m.avi	Motion Detection	☐
10:42:00	104200m.avi	Motion Detection	☐
10:43:05	104305m.avi	Motion Detection	☐
10:44:02	104402m.avi	Motion Detection	☐
14:34:02	143402m.avi	Motion Detection	☐
18:01:52	180152m.avi	Motion Detection	☐

2. The video file is with AVI format. On the video, it will display the date of the video file and the event. The user can click on the

video file to play back on Microsoft Media Player.

3. To delete the video, check the video file and click on **Del** .
When the USB device is full, it will remove the oldest video automatically.

VI. Factory Default

- i. Unplug the power of the Video Server
- ii. Please connect T+ to R+ in the back panel
- iii. Then connect T- to R- in the back panel
- iv. Turn on the Video Server and wait for few mins until IP installer can search the video server
- v. Please remove T+ T- and R+ R- connection
- vi. All the setting will be restored to factory default
- vii. Default IP is <http://192.168.1.210>, user name and password are admin

VII. Package contents

1. 4Ch Video Server
2. Adaptor
3. Ethernet Cable
4. CD (user manual, IP installation utility).